

ABSTRACT OF THE DISCLOSURE

An improved method for the simultaneous sequence-specific identification of mRNAs in a mRNA population allows the visualization of nearly every mRNA expressed by a tissue as a distinct band on a gel whose intensity corresponds roughly to the concentration of the mRNA. In general, the method comprises the formation of cDNA using anchor primers to fix a 3'-endpoint, producing cloned inserts from the cDNA in a vector containing a bacteriophage-specific promoter for subsequent RNA synthesis, generating linearized fragments of the cloned inserts, preparing cRNA, transcribing cDNA from the cRNA using a set of primers, and performing PCR using a 3'- primer whose sequence is derived from the vector and a set of 5'-primers that is derived from the primers used for transcription of cDNA from cRNA. The method can identify changes in expression of mRNA associated with the administration of drugs or with physiological or pathological conditions.